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*Report made in the name of the Committee on Mineral Waters for 1837. By M. PH. PATISSIER.*

(Continued from page 394.)

## Section 4.—OF CHRONIC DISEASES WHICH MAY BE DEVELOPED IN ALL PARTS OF THE BODY.

### *Chronic Rheumatic Affections, Lumbago.*—

These diseases are so common that they affect three-fourths of the persons who visit thermal establishments; and it is in the treatment of them that warm mineral waters are most efficacious. It is observed by practising physicians that baths of common water, taken at an elevated temperature, are not adapted for the cure of rheumatisms; for such baths, by diminishing in a great degree the energy of the skin, render it peculiarly sensible to the impression of cold and atmospheric moisture; whereas mineral baths, by stimulating the cutaneous system, enable it to react against atmospheric influences. From the fact that many rheumatic persons return annually to warm springs, it has been concluded by some, that in place of curing radically rheumatic affections, they only allay them for a longer or shorter time; but when a patient is cured of a rheumatism, he is not at all exempt from contracting a new one; the same causes may produce the same effects, and the latter bring back the patient to the means of cure or relief which had formerly succeeded with him. The best proof of the powerful action of thermal waters in cases of chronic rheumatisms, is the great number of the patients who resort to them annually, for a remedy soon ceases to be employed which fails to cure. Among the great number of persons who are affected with rheumatisms, and who go to the springs, some are cured, and others are relieved to a greater or less degree, provided they take the precaution of furnishing themselves with warm clothing, and wearing flannel next to the skin, which has the double advantage of preventing taking cold, and of keeping up the excitement produced upon the skin by the use of the baths. It should not be forgotten, however, that during, and often a short time after the use of warm mineral baths, the rheumatic pains are exasperated or renewed; and that it is a bad sign if these pains are not calmed during the immersion, and that, in this case, the

No. 52.

52

disease is either complicated with the venereal affection, or symptomatic pains of a morbid condition of the viscera, or of the deep lesion of some articulation, have been taken for rheumatic pains, (M. Bertrand.) The emaciation of the limbs, which is the result of long rheumatic pains, does not contraindicate the use of mineral baths, but it renders the cure longer and more difficult.

We must not think, however, that all warm springs are equally efficacious in the treatment of all kinds of rheumatism; those which are of long standing, and which affect persons who are robust and difficult of receiving impressions, are generally lessened in their intensity or cured, promptly, by the use of the waters of Mont d'Or, Baresges, Bourbonne, Bourbon-l'Archambault, Balaruc, Bagnères de Luchon, &c., taken in warm baths, strong, warm douches, and vapour baths; but if the rheumatism is recent, and accompanied by inflammation,—if the patient is of great nervous susceptibility, the mild waters of Neris, Bains, Bagnères de Bigorre, Plombières, &c., should be used in baths of moderate warmth, and in shower douches. The sulphur springs, particularly those of Barèges, are of less service in gouty or arthritic rheumatisms than in muscular rheumatisms. A gendarme, who had had several attacks of gouty rheumatism, was taken, after the fifteenth bath at Barèges, with dreadful pains in the joints, which yielded in the end only to adoucissans, to repose, and to the warmth of the bed. M. Gax, who cites this fact, reports that he himself was threatened with a new attack of articular rheumatism, to which he had been subject before, when, in order to become well acquainted with their action, he tried the waters of Barèges; after the fifth or sixth bath he felt in the thumb of the left hand a very intense pain, which went off on promptly abandoning the use of the waters. The waters of Mont d'Or, Vichy, Bourbon-l'Archambault, &c., are employed with success in gouty rheumatism without inflammation, attacking persons of but slightly irritable temperaments. It is particularly in the treatment of this kind of rheumatism that the waters of Bourbonne are so very efficacious. "Several patients affected with this disease," says M. Therreau in his report, "after having in vain tried



the different kinds of treatment indicated under like circumstances, came to Bourbonne still using crutches, which they had not been able to dispense with for many years past, and went away without them, either completely cured, or in a fair way of being so." "Few patients," says M. Bertrand, "find a more rapid relief at Mont

d'Or, than those who have gouty rheumatism; the crutches left at this watering place after the cures of such diseases, would be numerous, had there been a place where they might have been deposited, and each year would increase the collection."

STATISTICAL TABLE.

NAMES OF DISEASES.	Name of establishment.	Number of each disease.	Number of patients cured.	Number of patients relieved.	Number of patients treated without success.	Number of patients cured or relieved after leaving the watering place.
Muscular rheumatism.	Bourbonne.	118	51	54	13	0
Arthritic rheumatism.	Id.	66	25	37	4	0
Muscular rheumatism.	Barèges.	98	56	30	12	0
Lumbago.	Id.	6	3	3	0	0
Muscular rheumatism.	Rennes, (Aude.)	110	15	35	60	0
Rheumatisms.	Greoulx.	83	5	48	30	24
Lumbago.	Id.	27	2	19	6	8
Rheumatisms.	Bagnols, (Lozere.)	459	156	199	104	182
Muscular rheumatism.	Bourbon-l'Archambault.*	957	480	400	77	0
Articular rheumatism.	Id.	850	415	425	10	0
Muscular rheumatism.	Neris.	26	2	20	4	10
Articular rheumatism.	Id.	24	2	19	3	9
Nervous rheumatism.	Id.	30	0	25	5	9
Nervous rheumatism.	Bains.	37	12	18	7	8
Articular rheumatism.	Id.	16	3	13	0	0

**Gout.**—This disease, which is called the sister of rheumatism, differs from it, however, in several points; rheumatism is usually caused by the suppression of transpiration, while gout (*filia veneris et Bacchi*) is most frequently produced by an excess in sexual gratification, by the immoderate use of spirituous liquors, and by a succulent nourishment taken in larger quantities than the wants of the body require. Baths of warm mineral waters, by provoking abundant sweats, are of great efficacy in the treatment of rheumatism. They are, on the contrary, injurious, especially sulphur waters, in gout; we must except, however, the baths of Neris, which ameliorate the condition of gouty persons during a year or two, and especially the waters of Vichy, which seem to be endowed with the precious privilege of curing the gout, or, at least, putting off for a long time its attacks, as is proved by several observations published by M. Charles Petit. The frequent coexistence of gout with gravel has created the belief that the fluids of gouty persons contain uric acid, which has, in fact, been detected in them by modern chemists; and it is this belief which induced M. Petit to employ the waters of Vichy in the treatment of this, previously reputed, incurable disease. These waters, however, only succeed when the patient changes his diet and his habits, remains sober, gives up the exclusive use of meats and other aliments containing azote, abstains from pure wine and alcoholic liquors, and submits himself to the frequent,

if not habitual, use of the waters of Vichy, or at least of common water rendered more or less alkaline by means of bicarbonate of soda. Some practising physicians, and even M. Prunelle, the titular physician of Vichy, agree with the late M. Lucas in the opinion that the waters of Vichy, of which he had been inspector for thirty years, were more injurious than serviceable in gout. Alkalies have been, however, for a long time recommended in the treatment of gout: "they may be used with advantage," says M. Desbois of Rochefort, "in gout and rheumatism, when these affections are not of an inflammatory character, or when they are of long standing, with nodes and old gouty concretions; which articular concretions they are even of considerable efficacy in resolving." But the alkaline salts, such as bicarbonate of soda which abounds in the waters of Vichy, are much better borne by the stomach than the pure alkalies, and can be taken in the largest doses without inconvenience. Facts, moreover, are more to be depended upon than theory, and it appears to us impossible to contest those which have been related by M. Petit in two little works which he has addressed to you, and which show that under the influence of the waters of Vichy, several gouty persons have either been completely cured, or obtained a notable alleviation of their sufferings. In support of these facts, your reporter can cite the history of one of his near relations, aged fifty-four years, and gouty by inheritance for the last fifteen years; his legs habitually swollen, and his feet often painful, forced him to use a cane in walking.

\* From 1824 to 1833.



It is hardly necessary to say that this patient had used, without success, all the remedies against gout, praised by charlatanism. In 1837 he went to Vichy, where he used the waters internally, and in baths, for the space of a month. Six weeks after his return home, he wrote to me that he could walk two leagues without the assistance of a cane, and without fatigue. Having drank from time to time, during the winter and spring, alkaline water, and having observed a rigid diet, which he even adhered to before using the waters, he has since had no attack of gout. In the month of March, however, he complained of pains about the bladder, and as it was possible that these pains might depend upon the retrocession of the gout upon this viscus, which retrocession had taken place several years before, he went again to Vichy in the month of July, 1838, and is so much improved in health from this second trip, that he now actually walks up mountains without difficulty.

Notwithstanding the opinion of M. Charles Petit, that patients with gout and stone in the bladder can take the waters of Vichy in large

doses, without inconvenience, we think that generally these very active waters should be drank with reserve, as without this precaution they may produce gastritis and acute hepatitis. These inflammations, it appears to us, are much more to be feared than the solution of the fibrine of the blood by an excess of soda, and the bloody effusions which ought, according to M. Magendie, to result from this solution, effects which clinical observation has not demonstrated up to this day.

*Paralyses.*—Mineral springs of an elevated temperature are very efficacious in the treatment of paralyses, which have for their cause a rheumatismal or herpetic metastasis, or which are the consequence of internal diseases, or produced by metallic emanations; sulphur waters appear to have a special action against paralysis caused by lead. In paralysis, resulting from rheumatism, it is a good sign if the pains which preceded this affection, are revived during the use of the baths, or if the skin is affected with heat, local redness, or an eruption of small pimples.

STATISTICAL TABLE.

NAMES OF DISEASES.	Name of establishment.	Number of each disease.	Number of patients cured.	Number of patients relieved.	Number of patients treated without success.	Number of patients cured or relieved after leaving the watering place.
Different paralyses.	Bourbonne.	25	6	12	7	0
Different paralyses.	Bourbon-l'Archambault.*	310	91	200	19	0
Different paralyses.	Balaruc.	5	2	3	0	0
Rheumatic paralyses.	Rennes, (Aude.)	34	4	10	20	5
Different paralyses.	Neris.	23	0	17	6	4
Rheumatic hemiplegia.	Mont d'Or.	11	2	5	4	1
Different paralyses.	Bagnols, (Lozere.)	54	10	21	23	19
Paralyses of inferior limbs.	Barèges.	5	4	1	0	0

*Chronic diseases of the skin.*—It is generally agreed that, notwithstanding the labours of modern pathologists, diseases of the skin are very difficult to cure; we know, also, that patients affected with diseases of this kind, abound at mineral springs. Sulphur waters, particularly those of Barèges, Bagnères de Luchon, &c., are certainly very useful in the treatment of these diseases; but their use is abused; they are only suitable when the exanthemata are of long standing, without inflammation, without complication with venereal affections, and when they attack individuals of lymphatic temperaments. It is under such circumstances that the waters of Bourbonne, Bourbon-l'Archambault, Mont d'Or, and sea baths succeed sometimes. One of the most constant results of these baths, is to increase, at first, the eruption; but this should cause no alarm, for it is seen to diminish shortly afterwards in a remarkable manner. But when cutaneous diseases affect persons of irritable temperaments, and when they are accompanied by a

greater or less inflammation of the skin, baths of the slightly saline waters of Saint Alban, Avenas, Neris, Plombières, Bagnols (Orne,) Lons-le-Saunier, &c., are more beneficial, and they are most so when they are taken of a moderate warmth, when they are prolonged, and when the skin is allowed to be macerated, as it were, in the warm water. It is probably to the unctuous quality of these waters, and to the smallness of the quantity of mineral principles which they contain, that they owe their property of softening the integuments, and of appeasing the irritations of which they are the seat.

Out of one hundred and twelve soldiers affected with herpetic diseases, and treated in 1829 at Barèges, by our colleague, M. Gax, the proportion cured was 31 in 51, for the simple herpetic affections (without designation;) in pustulous herpes\* the proportion was a half, that is to say 10 in 20; in scaly herpes it was 14 in 18; in squamous herpes, 7 in 10; in inflammatory her-

\* From 1824 to 1833.

\* Herpes is the term used by Alibert for all scaly eruptions.



pes, 1 in 3; in syphilitic herpes, 1 in 5; in meulagra, 1 in 2; the only case of psoric herpes was cured; a repercessed herpes obtained but a slight relief. The waters of Avenes (Herault) seem, according to the report of their inspecting physi-

cian, to exert a special action in cases of acute herpes, eczema, and the pustular varieties of herpes; their action is less efficient in the scaly varieties; it is powerful in repercussions of the itch.

STATISTICAL TABLE.

NAMES OF DISEASES.	Name of establishment.	Number of each disease.	Number of patients cured.	Number of patients relieved.	Number of patients treated without success.	Number of patients cured or relieved after leaving the watering place.
Herpetic affections.	Bagnères de Luchon.	68	24	37	7	0
Id.	Bagnols, (Lozere.)	96	21	39	36	0
Id.	Greoulx.	64	14	42	8	0
Id.	Bourbon-l'Archambault.	210	36	174	0	0
Id.	Bourbonne.	61	14	29	18	0
Id.	Mont d'Or.	19	6	7	6	6
Id.	Neris.	7	0	6	1	0
Id.	Bains.	4	1	3	0	0

The collectors of these statistics have the frankness to confess, that among the patients whom they put down as cured, there may be a great number in whom the cure is only apparent; for in order to know with certainty what has been the result of their treatment, we must be able to have the patients under our observation for a long time after they have left the watering place, and see them again, one, two and three years after we believed them cured. It is thus, only, that we can assure ourselves that the cure has been real and permanent; for we know that herpetic diseases are so apt to make their appearance again after being apparently cured, that none other can be more obstinate under treatment. "We must mistrust, says Borden, "those remedies which promptly diminish, or cause to disappear, herpetic eruptions; for these too quick changes, threaten the viscera with some dangerous affection."

*Syphilitic affections.*—All warm mineral waters, on account of their sudorific effects, contribute to the development of secondary syphilitic affections, when the venereal virus is still latent; hence they may be used when its existence is inspected. Sulphur baths assist very much in the mercurial treatment, and a remarkable effect of the combined treatment is the absence of all salivation, notwithstanding the introduction of considerable doses of mercury into the economy, depending, no doubt, upon the abundant perspiration produced by the use of the sulphur waters. These waters repair, also, the damages done by mercury administered without caution; drank and used as gargles, they cicatrize the ulcers in the mouth and on the velum palati, fix the loose

teeth, and by restoring to the stomach and intestines their lost energy, regain to the patient his strength and flesh.

The object of treatment in all scrofulous affections, being to make the sanguineous system predominate over the lymphatic, it is readily conceived that sulphur and chalybeate mineral waters, and sea-baths, by reason of their tonic and stimulating properties, are adapted to fulfil perfectly this indication. Under the influence of these waters, therefore, we see scrofulous children acquire a more animated complexion, their digestion become regular, their strength become developed, and their abdomens, if large and indurated, become soft and return to their normal condition; the wounds and fistulous orifices which are made by the opening of abscesses, assume a florid colour, and take on all the characters of healthy wounds. It is, nevertheless, rarely that mineral waters, when employed alone, cure scrofula. "I know not by what fatality it is," says Borden, "that I have so seldom seen tumours and swollen glands completely discussed and removed by the waters of Pyrenées; and this after a rigid observation." Out of thirteen scrofulous patients whom M. Gax treated at Barèges, one only, who had an engorgement of the glands of the neck, and a chronic ophthalmia, was cured. To increase the power of the waters, of Barèges, Borden was in the habit of associating with their use, mercurial frictions upon the engorged glands and ulcers; the efficacy of iodine in the treatment of scrofula having since been discovered, it may now be substituted for mercury.



STATISTICAL TABLE.

NAMES OF DISEASES.	Name of establishment.	Number of each disease.	Number of patients cured.	Number of patients relieved.	Number of patients treated without success.	Number of patients cured or relieved after leaving the watering place.
Scrofulous engorgements.	Mont d'Or.	12	0	5	7	0
Engorgements of the submaxillary glands.	Id.	7	3	1	3	0
Scrofulous affections.	Balaruc.	13	0	5	8	0
Engorgements of lymphatic glands, abscesses, ulcers, fistulous openings, &c.	Bourbonne.	132	57	62	13	0
Scrofulous ulcers.	Bourbon-l'Archambault.	43	18	15	10	0
Scrofula.	Neris.	4	0	2	2	1
Scrofula.	Bagnoles, (Lozere.)	78	17	38	23	40
Scrofulous affections.	Bagnères, (Luchon.)	41	14	10	17	9
Scrofulous affections.	Sea-baths, Boulogne.	9	3	6	0	0

We know that *Rachitis* acts upon the osseous system, alters its structure, softens it, and produces a great number of deformities, either in the vertebral column, or in the limbs. Sea baths, sulphur and chalybeate waters, by exercising a tonic effect upon the whole body, strengthen the limbs, and give to the bony structure a sufficient development and hardness to enable it to preserve its natural form, or to resist all farther deformity. In cases of this disease, the mild waters of Ussat, Neris, Bains, &c. should not be used, as they have the property of softening the fibrous tissue, the fibro-cartilages, and even the bony tissue in a remarkable degree.

Section V. *Surgical diseases*.—It remains for us to speak of stiffness of joints, of muscular retractions, and muscular weakness, of articular swellings, incomplete anchyloses, &c.; all the

thermal waters are, in these cases, of pretty nearly the same efficacy. We must not, however, forget that patients convalescent from fractures, should not be sent to warm mineral springs, until six months after the accident, when the callus is perfectly solidified, for several of these springs, and particularly those of Bourbonne, Neris, and Carlsbad, possess the singular property of softening bony tissue, and disposing the callus to rupture; an important remark, and one from which useful hints may be drawn for the straightening of fractured limbs which have been improperly set. As to gun-shot wounds, fistulous ulcers, and caries, these diseases are more surely cured by the waters of Barèges, Bagnères de Luchon, Bains near Arles, Bourbonne-les-Bains, Bourbon-l'Archambault, &c., and by sea baths, than by other warm mineral springs.

STATISTICAL TABLE.

NAMES OF DISEASES.	Name of establishment.	Number of each disease.	Number of patients cured.	Number of patients relieved.	Number of patients treated without success.	Number of patients cured or relieved after leaving the watering place.
Hydarthroses.	Mont d'Or.	8	1	3	4	2
Caries of vertebræ.	Id.	2	0	0	2	0
Secondary luxations, threatened or completed.	Id.	10	0	4	6	0
White swellings, from metastasis of rheumatism.	Rennes, (Aude.)	42	8	14	20	9
White swelling, with exostosis.	Id.	31	0	6	25	2
Chronic sprains.	Id.	74	4	30	40	3
Gunshot wounds, fistulous wounds.	Barèges.	8	2	6	2	0
Pains in bones.	Id.	5	0	2	3	0
Articular engorgements.	Id.	12	3	3	6	0
False anchyloses.	Id.	9	0	6	3	0
Muscular retraction.	Id.	3	0	2	1	0
Lesions consequent upon gunshot wounds, and on wounds by cutting instruments.	Bourbonne.	48	24	22	2	0
Id.	Bains-d'Arles.	27	7	16	4	0



We have summed up the preceding considerations in the following table, which shows at a glance what waters are best adapted to the treatment of each disease :

TABLE of the most frequent Chronic Diseases, with a designation of the Mineral Waters adapted to their treatment.

Names of diseases.		Indications for treatment.	Designation of mineral waters adapted to the disease.
Diseases of the head.	Paralysis, (following apoplexy.)	When there exists no signs of congestion in the brain, and when the patient is of a lymphatic or little irritable temperament.	Waters of Bourbonne, Balaruc, Bourbon-l'Archambault, taken internally, in tempered baths, and douches upon the paralysed part.
	Nervous affections, hysteria, hypochondria, catalepsy, chorea.	If these maladies are recent, idiopathic, without complication.	Waters of Ussat, of St. Sauveur, of Salut at Bagnères de Bigorre, of Neris, Bains, &c., taken internally, in tempered baths, and in shower douches.
	Facial neuralgia, (tic douloureux.)		Same waters taken internally, in baths, and Scotch douches upon the head; sea-baths, with affusion.
	Goitre.	If it depends upon hypertrophy of the thyroid gland.	Waters of Heilbrunn in Bavaria, internally, and in douches.
Diseases of the chest.	Chronic pulmonary catarrh, chronic pneumonia, chronic pleurisy, laryngeal phthisis, pulmonary phthisis in first degree, idiopathic humid asthma, passive hæmoptysis. <i>Note.</i> —These diseases are curable by the waters when there is no fever, heat, or dryness of skin, and when their cause is metastatic.*	If the patient is of a lymphatic, or little irritable constitution.  If the patient is of a dry, nervous constitution.	Waters of Mont d'Or, of Bonnes, of Raillère at Canterets, &c., internally, and in semicupia.  Waters of Ems, (Duchy of Nassau.)
	Palpitations.	If they depend upon general atony and chlorosis; if they are nervous.	Chalybeate waters of Forges, Spa, Piedmont, &c.; sulphur waters internally, and in baths.
	Aneurism of the heart or large arteries.	All mineral waters do injury, by quickening the circulation.	
	Chronic gastritis, chronic enteritis, gastralgia, nervous vomiting, anorexia, flatulence, chronic diarrhœa. <i>Note.</i> —These diseases are only curable by mineral waters when they are not caused by scirrhus or cancerous affections.	When these diseases are the result of inflammation, or of a nervous character.  If there is atony of the digestive canal.  If these diseases are owing to a bilious or mucous state of the gastro-intestinal canal.  If these maladies are the result of a retrocession of a morbid principle.	Cold acidulated waters of Ponges, Chateldon, Seltz, Contrexville, &c.; waters of Plombières, taken internally, and in baths.  Chalybeate waters of Forges, Spa, &c.; sulphur waters of Canterets, &c., internally, and in baths.  Waters of Niederbronn, of Balaruc, and Bagnères de Bigorre, internally.  Warm mineral waters, internally, in baths, douches, and vapour baths.
Diseases of the abdomen, (digestive canal.)	Mesenteric atrophy, (tabes mesenterica.)		Chalybeate waters; sea-baths.

\* That is, depending upon the suppression of the transpiration of a habitual flux, or the retrocession of rheumatismal, gouty, herpetic, and psoric principles.



## Same Table continued.

<i>Names of diseases.</i>		<i>Indications for treatment.</i>	<i>Designation of mineral waters adapted to disease.</i>
Diseases of the digestive canal.	Engorgement of the abdominal viscera, (obstructions of the liver and spleen,) biliary calculi, jaundice, old intermittent fever. <i>Note.</i> —Mineral waters can remove the visceral engorgements when they are recent, passive, and the product of a congestion of blood, or of a simple hypertrophy of the liver or spleen.	If the patient is of a lymphatic constitution, and if there exists no traces of inflammation.	Waters of Vichy; chalybeate waters internally, in baths, and in douches upon the abdomen.
		If the disease is nervous; if the irritation of the viscus is not entirely removed.	Cold, acidulated waters, (Ponges, Contrexville, Seltz, Chateldon, &c.) internally; waters of Plombières.
		If the digestive canal is in a bilious or mucous state.	Laxative waters of Niederbronn and Balaruc; purgative waters of Seidlitz, Pullna, &c.
		If the engorgement is caused by metastasis.	Warm mineral waters internally, in baths, in douches and steam-baths.
	Hæmorrhoidal flux.	If the flux is passive and abundant. If the flux is suppressed.	Chalybeate waters internally. Warm mineral waters internally, in baths and douches directed towards the rectum.
Diseases of the urinary passages.	Incontinence of urine.	If it is the result of a general or local feebleness.	Sea-baths; sulphur waters internally; baths slightly cold, and douches upon the lumbar region.
	Chronic vesical catarrh.	If there exists any signs of irritation; if the disease is nervous.	Cold, acidulated waters, as of Ponges, Contrexville, Seltz, &c., internally.
	Chronic catarrh of the bladder.	If the patient is of a lymphatic constitution, and if there exists no traces of inflammation.	Waters of Vichy, St. Nectaire, and Mont d'Or; sulphur waters internally, in baths, and in douches.
		If the disease is the result of a retrocession.	Warm mineral waters internally, in baths, douches, and steam-baths.
	Gravel.		Waters of Vichy, St. Nectaire, Contrexville; all cold, acidulated waters internally, and in baths.
Diseases of the genital organs.	Male. Impotency, exhaustion resulting from masturbation, or excess in sensual pleasures; involuntary seminal discharges; blenorrhœa.		The waters of Vichy, which are rich in bicarbonate of soda, are the only waters which clinical observation has proved, up to this day, to be adapted to the solution of urinary calculi.
			Sulphur waters; saline waters of Bourbonne, Balaruc; waters of Mont d'Or, Bourbon-l'Archambault, &c., taken internally, and in moderately warm baths and douches upon the lumbar region; sea-baths in the waves.
	Female. Amenorrhœa and dysmenorrhœa.	If the suppression of the menses is owing to atony, as with chlorotic females.	Sulphur and chalybeate waters internally, and in baths and douches; sea-baths.
		If the suppression of the menses is produced by plethora, or by an excess of sensibility of the uterus.	After the antiphlogistic treatment, the waters of Neris, Luxeuil, Bains, &c., in moderately warm baths.
	Menorrhagia.	If it is passive without organic lesion.	Sulphur waters and chalybeates; sea-baths in the waves.



## Same Table continued.

		Names of diseases.	Indications for treatment.	Designation of mineral waters adapted to the disease.
Diseases of the Genital Organs.	Female.	Leucorrhœa.	When it is owing to a general or local feebleness.	Sulphur and chalybeate waters, and saline waters of Bourbonne, Balaruc and Mont d'Or, internally, and in baths and douches directed towards the vagina; sea-baths.
		Relaxation or prolapsus of the uterus.		Same treatment, especially sea-bathing.
		Chronic metritis.	When the patient is of a lymphatic constitution, and there exists no farther inflammation.	Same treatment; douches directed towards the vagina.
			If there still exists a little phlogosis, and if the patient is of a dry, nervous constitution.	Cold acidulated waters of Neris, Luxeuil, Bains, &c., internally, and in baths of moderate warmth.
Diseases which may affect every part of the body.		Sterility.	If the sterility can be attributed to a feeble, or to a too abundant leucorrhœal flow, or to a want of excitability in the uterus.	Sulphur and chalybeate waters; waters of Bourbonne, of Balaruc, and Mont d'Or, internally, in baths and douches; sea baths.
			If the sterility is owing to a nervous affection, or to an excess of general or local sensibility.	Waters of Neris, St. Sauveur, Bagnères de Bigorre, Plombières, Bourbon-Laury, &c.; internally and in baths of moderate warmth.
		Rheumatic affections, (lumbago and sciatica.)	If the rheumatism is of long standing, and if it affects a robust individual, difficult of receiving impressions.	Sulphur waters; waters of Balaruc, Mont d'Or, &c., internally, in baths, douches, and steam baths.
			If the rheumatism is recent, and accompanied by a great sensibility.	Waters of Neris, Plombières, Luxeuil, Bagnères de Bigorre, &c., in baths of moderate warmth, and shower douches.
		Chronic gout.	In the intervals of the attacks.	Waters of Neris, and especially of Vichy, internally, and in baths.
		Paralysis without cerebral lesion.	If it is caused by a metallic emanation.	Sulphur waters internally, and in warm baths and douches.
			If the cause is metastatic.	All thermal waters internally, in warm baths and douches.
		Chronic diseases of the skin, (herpes, conperose, ephélide, old itch, and disposition to erysipelas, or boils.)	When there is no acute inflammation of the skin and the patient is of a soft, lymphatic temperament.	Sulphur waters of Baresges, Bagnère de Luchon, Molitg, &c., internally, in baths, douches, and steam baths.
			If there exists a strong irritation in the skin, and if the patient is of an irritable constitution.	The slightly saline waters of Avenas, Neris, Plombières, Bagnoles, (Orne,) Luxeuil, Lonsche, St. Gervais, &c., internally, in moderately warm baths, prolonged, and in shower douches.
		Scrofula; engorgements of glands; strumous ulcers; strumous ophthalmia; rachitis.	If there exists no symptoms of inflammation.	Sulphur and chalybeate waters; saline waters of Bourbonne and Balaruc; the waters of Mont d'Or; internally, in baths and douches; sea baths.
		Syphilitic diseases; secondary syphilis; mercurial cachexia.		All thermal waters, internally and in baths, contribute to the development of venereal diseases when they are still latent; sulphur waters aid the mercurial treatment and repair the damages effected by mercury administered without circumspection.



Same Table continued.

	Names of diseases.	Indications for treatment.	Designation of mineral waters adapted to the disease.
Diseases which may affect every part of the body.	General debility; stiffening of limbs; feeling of cold in a limb, accompanied by muscular weakness.		Sulphur waters, waters of Bourbonne, Balaruc, Mont d'Or, Bourbon-l'Archambault, &c., in baths slightly warm, and warm douches upon the stiffened parts, and the vertebral column; sea baths.
	Stiffness and contraction of limbs after fractures; luxations, sprains or contusions; emaciation, commencing atrophy of members; hyarthroses with complete ankylosis.		Muds of Saint Arnaud, de Barbotan, and all warm springs. Convalescents from fractures should not resort to them for six months after the consolidation of the callus, as several of these springs have the property of softening bony tissue, and new fractures might occur.
Surgical Diseases.	White-swelling.	When the white-swelling is rheumatic in its nature without inflammation.	Most thermal waters in baths and shower douches.
		If the engorgement is articular, or is maintained by a scrofulous diathesis.	Sulphur and chalybeate waters, internally in baths and douches.
	Accidents resulting from gun-shot wounds, fistulous ulcers, caries of bones.		Waters of Bareges, Aix-in-Savoy, Bagneres, de Luchon, Bourbonne, Balaruc, Bourbon-l'Archambault, &c., in baths, and especially in douches.

The details into which we have been entering, go to show that mineral waters constitute an active remedial agent, which, when prescribed properly, is a resource of great value in the treatment of many chronic diseases, for the cure of which ordinary means are powerless; that their employment ought to be regulated by the general rules of therapeutics, that is to say, by the indications to be fulfilled; that diseases similar in appearance, require the use of different mineral waters; in a word, that to fix upon the choice of a mineral water, the physician ought to take into consideration the different circumstances of the disease, its causes, its periods, its complications, and the temperament of the patient.

Although we have made known to you the results of but a few of the recapitulative tables sent by the inspecting physicians, still, what we have said suffices to show you that if these tables are made with care and good faith, the Academy may, in a few years, make up a well grounded opinion upon the medicinal effects of the mineral waters of France; compare them with one another as to their action in diseases of nearly the same nature, and by considering this action in connection with the constituent elements of the waters, substitute rational principles for the motives, for the most part empirical, which influence physicians, at present, in their employment of them. Unfortunately, the clinical facts which serve as a base for these tables, being unprovided with particulars upon the causes and symptoms of the diseases, are not of great scientific value. The Academy, on this account, gives notice to the inspect-

No. 52.

53

ing physicians, that it will highly approve of the zeal of those who will join to their reports special observations well detailed, and all other documents which may serve to throw light upon the therapeutical properties peculiar to each mineral spring.

## FOREIGN CORRESPONDENCE.

LETTER FROM ADJUNCT PROFESSOR MARTINS, of the Faculty of Medicine of Paris.

No. II.

*On the method of Measuring the Temperature of the Human Body in Various Diseases.*

To the Editors of the Medical Examiner.

PARIS, April 27th, 1839.

Any inflamed tissue or organ communicates the sensation of heat. In a phlegmon or an erysipelas, it may be appreciated by the hand of the physician; in an internal inflammation, it is distressingly felt by the suffering patient. In some affections, there is the sensation of cold. In the first stage of an intermittent fever, the patient feels it; in an attack of cholera, the physician. It may naturally be supposed, that the observers of these phenomena have been anxious to measure them with exactness; but their attempts have heretofore failed, or have been unattended with accurate results. The causes of these failures have been:—1st, the imperfection of the instruments employed; 2d, a want of experience in



the observers who have attempted to use them. For the last ten years, however, the subject in question has occupied the attention of a gentleman of skill and science, M. Walferdin. He has published only a few isolated results on the topic, but he has been so kind as to place at my disposal the following important views and facts which I am about to lay before your readers, and which have never before been made public. They are, in my opinion, entitled to the highest consideration of the physician, as well to spare him useless labour, as to point out to him the only path by which this important point of physiology and pathology can be advanced.

Ordinary thermometers serve to distinguish only striking differences of temperature, inasmuch as they are ordinarily divided into degrees, the extent of which does not exceed a line; and, in fact, the means of constructing the instruments otherwise are unknown, without giving them an inconvenient size. It is hence difficult to appreciate, with any thing like exactness, above a quarter of a degree. These defects are notorious, and acknowledged by all men of science. But, besides these, there are others which are less generally appreciated; for it is not generally understood, that the indices used to mark the degrees are themselves exceedingly inaccurate.

In the first place, the tube of a thermometer is never perfectly cylindrical. To satisfy yourselves of this fact, you have only to introduce a small quantity of mercury into a tube, and, upon examining it with a magnifying glass, you will not find it of the same length in any part of the tube. But, how do the makers of thermometers attempt to obviate this defect? In the following manner: They compare the thermometer, which they are graduating, with a standard thermometer, at zero, at  $15^{\circ}$ , at  $30^{\circ}$ , &c. These points are, therefore, exact; that is to say, when the mercury is at  $15^{\circ}$ , that temperature is accurately marked. Not so, however, between zero and  $15^{\circ}$ . Let us, for example, suppose that the cylinder of the tube is greater between  $6^{\circ}$  and  $8^{\circ}$  (centigrade,) than elsewhere; it follows, that the marks of these three degrees ought to be less distant from each other than the rest, since the same quantity of mercury will occupy a much smaller space: but this is not actually the case in the instrument, all the degrees of which are equal, and, consequently, inexact. It follows, therefore, that for a thermometer to be an accurate instrument, it should be graduated from degree to degree, which is quite out of the question.

We shall next proceed to point out another defect, of no less importance than the former, which necessarily belongs to all ordinary thermometers. When the thermometer to be constructed is compared with the standard thermometer, it scarcely ever happens that these two instruments have bulbs of equal capacity. What is the consequence of this difference of capacity? Let us suppose, for example, that the bulb of the standard thermometer is the smaller: the two instruments are plunged into water of about the temperature of  $15^{\circ}$ , and the height to which the mercury rises in the thermometer to be graduated is marked  $15^{\circ}$ , because that cipher is indicated on the other instrument. But the fact is not borne in mind, that the bulb of the latter being much smaller, is operated upon more readily by the heat of the water, and reaches its temperature more rapidly than the bulb of the other; consequently, when the standard thermometer marks  $15^{\circ}$ , the height to which the mercury will have reached in the stem of the other, will actually correspond only to  $14^{\circ}$ , or  $13^{\circ}.5$ , or even  $13^{\circ}$ . But, it will be said, there is a very simple means of remedying this source of error: it will be accomplished by leaving the two thermometers long enough in the liquid for both to attain an equilibrium of temperature. But, in avoiding this, you fall into another error. A liquid never remains for a length of time at a fixed temperature; it is constantly either rising or falling, and one of the thermometers will always indicate these variations before or after the other, according as its bulb is smaller or larger.

How then has M. Walferdin avoided these defects, in the thermometers which he has contrived to measure animal temperature? In the first place, in order not to give his instruments too great a length, he constructs them so that the mercury does not escape from the bulb under  $30^{\circ}$ , (centigrade,) and that at  $45^{\circ}$  it reaches the extremity of the stem. The thermometer has, therefore, a range of  $15^{\circ}$ ; its total length is from 6 to 7 inches, and is divided into 250 or 260 parts. Hence a degree of centigrade corresponds to about 16 or 17 divisions; and a half a division, (which is easily estimated,) gives you the 1-32d of a degree of centigrade. The bulb of these thermometers has the shape of an olive, and the walls of the tube are very thick, and of the same diameter as the bulb, although the mercurial column is quite capillary. It is hence easy to introduce the thermometer into the mouth, the anus, the urethra, of men and animals, without



danger of its being broken. It has been seen that thermometers, of the kind described, indicate variations in the animal temperature of 1-32d of a degree, and I have already made use of them with success, to ascertain the influence of diet and of the seasons upon the animal temperature. I am waiting to publish these results, until I collect an amount of accurate observations.

To obviate the first inconvenience spoken of, the inequality in the diameters of the tubes of different thermometers, M. Walferdin compares his thermometer with a standard as perfect as possible, at points of, for example, five degrees of distance, from 30° to 45°, by plunging them into a large mass of liquid, the temperature of which is made to remain fixed for about ten minutes, by a method to be presently pointed out. He marks the number of divisions, which corresponds, for instance, to the space between 30° and 35°; then that which corresponds to the space between 35° and 40°, and so on. It is evident that, by this means, we altogether avoid the inconvenience arising from the inequality of the diameter of the tube in its whole length. In fact, there will be sometimes 16 divisions corresponding to a degree of centigrade, sometimes 16.5, or even 17, and sometimes but 15, and, according to the point observed, will be determined the value of a degree at the point.

M. Walferdin determines the fixedness of the temperature of the liquid employed to compare the instruments, by means of a little ingeniously-contrived thermometer, which he calls the *metastatic spirit-thermometer*. This is a little thermometer nearly filled with colourless alcohol, but in the bulb of which there is a globule of mercury. To ascertain that the temperature of any medium undergoes no variation, this little thermometer is plunged into it; it takes the temperature of the medium; is withdrawn; evaporation produces a slight fall of the temperature; it is then suddenly turned upside down; the globule of mercury becomes engaged in the capillary tube of the thermometer, which is immediately replunged into the medium. It now remains in the stem, but its undulations indicate the slightest variations in the temperature of the liquid. Mr. Walferdin makes use of a thermometer of this kind, the whole length of which is but a degree of centigrade, and, being divided into 500 parts, will point out variations of the  $\frac{1}{500}$  of a degree. When this little thermometer remains without variation for five or ten minutes, it is certain that the temperature of the liquid has not changed,

and, consequently, that the two thermometers are at the same degree of heat. Then, upon that which is to be graduated, is marked the height which the mercurial column has reached, and the degree is of course exactly denoted.

These purely scientific details are, perhaps, a little dry; but they will not, I trust, be without interest to readers who must be desirous of knowing how far they can rely upon the instruments they employ, and who will, therefore, pardon this digression into the domain of medical physics. My next letter shall be devoted to a more strictly medical subject.

## BIBLIOGRAPHICAL NOTICES.

*Address to the Graduates of the Philadelphia College of Pharmacy, April 23d, 1839.* By JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy.

THE character of the pharmaceutic profession in Philadelphia is deservedly high. Since its disconnection with the sister profession of physic—a connection still generally maintained throughout the country—it has fallen into excellent hands. Our apothecaries have the benefit of a course of capital lectures, and commence their avocation with a certificate of attainments, upon which, from the character of the examination to which they are subjected, the profession and the community may rely with confidence. The address before us, delivered at the last annual graduation, is a well conceived and executed portraiture of pharmacy, as it should be, as a profession and a science.

*The Invalid's Guide to the Hot Springs of Virginia, with Cases, &c.* By THOMAS GOODE, M. D.

The Hot Springs of Virginia consists of six springs, the temperature of which ranges from 98 to 106 degrees of heat. Taken internally, they are antacid, aperient, diuretic, and diaphoretic. They are chiefly efficacious, however, when used as a bath. Dr. Goode publishes a number of cases, illustrative of their good effects in a variety of diseases.

*Proceedings of the Medical Convention of Ohio, held May, 1839.* Cleveland, 1839.

The scientific and professional zeal of our brethren of the West again elicits our applause, in the proceedings of the third session of the Medical Convention of the State of Ohio. The perusal of the Journal of these proceedings has



given us great pleasure, and strengthened our conviction of the numerous happy effects which result from such assemblages. Why cannot the Profession of our own state follow the example of our enterprising sisters?—we trust that she will, at least, respond to the call for a National Medical Convention, to which the Convention of Ohio has elected delegates, to meet in Philadelphia, in May, 1840. Two interesting papers were read at the Ohio Convention—an elaborate and spirited sketch of the climate and early diseases of Ohio, by Dr. Hildreth, and a more particular account of the medical topography of Licking county, by Dr. Richards. Productions like these illustrate the value of Medical Conventions.

### FOREIGN SUMMARY.

*Clinical Lecture on Pulmonary Consumption.* By ROBERT CARSWELL, M. D.—Gentlemen: I am desirous, to-day, of directing your attention to two cases of phthisis lately admitted to the male ward, both of which are highly deserving of your attention, on account of the differences which they present in regard to the probable origin of the disease, its progress, and the morbid phenomena by which its presence is recognised in each.

The first patient, James Shirley, 36 years of age, of a stout, muscular form, states that he never had a day's illness before the present attack, which was only two months and a half ago, although the disease has already arrived at the commencement of the second period; that is to say, the softening of the tuberculous matter, and the formation of tubercular excavations.

The second patient, William Calvert, aged 40, of a slight habit of body, and nervous temperament, dates the commencement of the disease to a somewhat later date; yet, in this patient, it may be said to be only at the commencement of the first stage; that is to say, the material or essential anatomical element of phthisis, the tuberculous matter, is yet in that state which is generally denominated the state of crudity. Under these circumstances, and as the physical signs of phthisis pulmonalis are derivable from the presence of the tuberculous matter, and the morbid conditions to which, as a foreign body, it gives rise in the pulmonary tissue, it is obvious that these signs must, in these two cases, be considerably modified; and so much so is this the case, that whilst in the first patient, in whom the disease is advanced and progressing rapidly, the physical signs are marked and readily detected by percussion and auscultation; in the second these are so slightly announced by these means, that an ordinary observer might overlook them altogether. The existence of phthisis in this patient is, however, not less certain than in the former,—as certain, indeed, as if we heard those sounds which indicate the presence of tubercular

excavations. I shall presently state the grounds on which the certainty of our diagnosis is founded in this and similar cases. In the mean time I shall briefly state the case of William Calvert, the patient in whom we have the example of incipient phthisis.

This patient, 40 years of age, was admitted the 13th of this month. ~~He is a tailor~~ by profession; rather of regular habits; both of his parent died of some affection of the chest; he has brothers and sisters who are all healthy; he himself has always been delicate. At the age of 18 he became subject to colds; fourteen years ago he had rheumatic gout; when a boy he had frequent attacks of epistaxis. Three months ago, having caught a fresh cold from coming out of a warm workshop into the cold night air, he became subject to a cough, more severe than any preceding one, and which was accompanied by occasional hæmoptysis. The blood spit up was usually in streaks in the sputa, but sometimes in clots. The hæmoptysis, when it first appeared, continued for two days, but was not very profuse. It has gradually diminished in quantity, and became fainter in colour since the commencement of the attack.

On his admission he presented the following symptoms:—Pain and constriction across the chest; headach; considerable heat of skin; profuse perspirations at night; alternations of heat and cold; occasional rigors; weakness and pains in the limbs, especially in the knees, which are worse when he is hot. On percussion the sound is *dull* on the right side, under the clavicle; in the same situation, on the opposite side, it is natural. On the same side, viz., the right, on which the sound is dull on percussion, the respiratory murmur is *diminished in intensity*, and is somewhat *rough or harsh*. This character of the respiratory sound accompanies not only *inspiration*, but also *expiration*; and, besides, the expiratory sound is greatly *increased in intensity*, being nearly equal to that which accompanies inspiration. On the left side, that on which the sound on percussion is clear, the respiratory sound is, perhaps, stronger than natural; *expiration*, however, not being accompanied by a proportionate increase in intensity of the sound to which it gives rise; the breathing is short; pulse 76; appetite bad; bowels confined; flatulency; urine plentiful, but at times high coloured.

Taking a general view of this case, we find in it a good illustration of the manner in which the phenomena of phthisis pulmonalis are successively developed, more especially where there is an hereditary predisposition to the disease, as was probably the case in our patient, whose parents are said to have died of a chest affection, and notwithstanding that his brothers and sisters are stated to be in good health. From his boyhood upwards he has been delicate and subject to colds, and has not got rid of the cough with which he became affected three months ago. This last cough has been accompanied by hæmoptysis, the blood appeared in the sputa, either in streaks or clots. This has gradually diminished, and ultimately disappeared; but it has been succeeded



by various constitutional derangements, chiefly febrile symptoms of a hectic character, viz., alternation of heat and cold, occasional rigors, and profuse perspirations. Of these precursory symptoms by far the greatest amount of value, in a diagnostic point of view, is to be attached to the hæmoptysis, as predicating the existence of tubercular phthisis. Its occurrence in this case along with, and after repeated attacks of cough, increases its diagnostic value; and taken in connection with the local signs which I have enumerated as existing in the right side of the chest, we cannot hesitate to attribute its occurrence to the presence of tubercles in the lungs; as indicating, in fact, three months ago, the existence of tubercular phthisis in this patient. In attaching so much importance to hæmoptysis, I do not mean to convey the idea that it may not frequently occur, and to a great extent, independently of the presence of tubercles in the lungs. On the contrary, it is well known that hæmoptysis may be the consequence of disease of the heart or large blood-vessels, and more especially the consequence of deranged menstruation, and other obvious morbid states; but when none of these causes are present, and when it occurs repeatedly, either before or after the supervention of cough, it is of all the symptoms at the commencement or early stage of phthisis, by far the most important as indicating the existence of the disease. Of the value of this symptom of phthisis you will consult with advantage the work of M. Louis, whose labours on the pathology of this disease will afford you much practical diagnostic information.

I may, however, further observe, in regard to this important symptom, that although it most frequently occurs in patients who have, as in the case of our patient, been subject for a variable length of time to cough, it is not unfrequently met with in others who have never had cough; who are, in fact, to all appearance, in the enjoyment of perfect health; and in such cases, and in the absence of other causes, is the first symptom of incipient phthisis, or of the presence of tubercles in the lungs; and I may further notice the fact that hæmoptysis is a very rare occurrence, indeed, in catarrh or bronchitis, a fact which gives additional value to its presence as a diagnostic symptom of phthisis.

I have said that the local signs furnished by percussion and auscultation in this case, greatly increased the diagnostic value of the hæmoptysis as a symptom of the early stage of tubercular phthisis. These local signs were limited to the right side of the chest, within a circumscribed space under the clavicle. They consisted of some dulness on percussion; a rough or harsh sound during inspiration; and of a sound nearly as strong, and much of the same character, during expiration. All of you are, no doubt, familiar with the value of the first sign, or dulness on percussion in the subclavicular region, as indicating the existence of tubercles in this region of the chest, this being so frequently the primary seat of these bodies as to constitute a law in re-

gard to their relative frequency in the pulmonary organs. Here, however, the dulness was so slight that it might have been overlooked, or its importance might have been underrated, but for the harshness of the sound which accompanied inspiration, and more especially the existence of an analogous sound during expiration. You are aware that in the healthy state of respiration the sounds which accompany inspiration are the vesicular, bronchial, and tracheal; that those which accompany expiration are the bronchial and tracheal. There is no vesicular murmur heard, and even very little of the bronchial sound, during healthy expiration. The reason why the sounds alluded to are produced with greater intensity, and in greater number, in inspiration than in expiration, is sufficiently obvious if we reflect on the mechanism of respiration. During inspiration the air, as has been remarked by Dr. Williams, is the moving body, and entering the lungs with considerable velocity, impinges against the angles and sides of the bronchi and cells which it has to dilate, and must give rise to sound throughout the whole course of its passage. During expiration, the air, on the contrary, is put in motion by the compressed and contracting lungs, and yielding passively to this cause, does not acquire motion or resistance enough to produce sound, until, by the converging together of the small tubes, it is gathered into a current in the larger tubes, where, impinging against their sides with its now acquired velocity, it at length produces sound. Hence you can perceive why sound is heard only towards the middle or termination of the act of expiration, and heard only in bronchi of a certain size; and why it should possess a somewhat hollow and blowing character, rather than the diffuse, soft, vesicular murmur of inspiration, heard over the greater part of the surface of the chest.

I have mentioned these circumstances in regard to the production of sound during inspiration and expiration, that you might perceive more clearly the value of the sign observed in this patient manifested during the latter act. Instead of being feeble, the sound of expiration is increased, and nearly as loud as that of inspiration. Now, what is the cause of this, and how is it occasioned? That it depends on the presence of tubercles there seems to be now no longer the slightest doubt; Louis, Andral, and others, having verified the fact since it was first pointed out by the late Dr. Jackson, a young American student, while studying the stethoscopic signs of phthisis in Paris.

As to the manner in which this sound is produced, or becomes perceptible to the auscultator, the following is the explanation given of it by Dr. Jackson:—

“As soon as tuberculous matter is deposited there exists a solid material around the bronchi, which will transmit the sound made by the passage of the air through these tubes. But at this early period of the disease a certain portion of the lung in the part affected is still permeable to the air, and, therefore, the murmur of vesicular



expansion, during inspiration, entirely masks the sound of the air passing through the bronchi, which would otherwise have been transmitted through the denser surrounding medium. During expiration, however, circumstances have changed; the air, on passing through the bronchi, produces the same sound as on its entrance; and, as now there is no vesicular expansion to mask it, it is easily transmitted through the diseased or condensed part to the ear of the observer."

How far this explanation of the sound in question be the correct one, is a matter of no great importance; its occurrence, under the circumstances which I have mentioned, at an early stage of phthisis pulmonalis, and as indicating the presence of tubercles in the portion of the lung in which it is heard, is certainly one of the most important of the physical signs of this disease.

Before leaving this case, I may direct your attention to the sputa, which are peculiarly characteristic of the early stage of phthisis, when not complicated with bronchitis or pneumonia. In this patient they form a striking contrast to those observed in the other patient, in whom the disease is much farther advanced. They consist of a gray or pearly-coloured substance, of the consistence of tough mucus or boiled albumen, semi-transparent, collected into rather small irregular masses, swimming in a moderate quantity of a clear, watery-looking fluid, or slightly adherent to the vessel in which they are contained. The quantity of the sputa may vary considerably, but in general is not great, and in our patient is small, and is coughed up with considerable difficulty.

These, then, are the principal circumstances to which I have been desirous of directing your attention in this case, viz., the characters of the sputa, the physical signs detected by percussion and auscultation, as signs of the early or incipient stage of pulmonary phthisis, and the hæmoptysis by which it is so frequently preceded.

I shall now make a few remarks on the principle of the treatment which I have adopted in this case; and I may first observe that the case is one which, as regards the stage of the disease, and its limited extent, offers a fair chance of success to any plan of treatment which has received the approbation and recommendation of practical physicians. The plan of treatment to which I now shall allude is that which consists chiefly in the frequent use of *emetics*. Whatever may have been the theory of the disease which suggested this plan of treatment, it was, at a remote period, adopted and recommended by several eminent physicians, as the most successful; and numerous cures of phthisis are reported as having been accomplished under its judicious management. It is a method, however, which was never generally adopted, and must, no doubt, have often sadly disappointed both the patient and the practitioner; and, besides, when we reflect on the very imperfect means which the physician, at the time this practice was most in vogue, possessed of determining the existence of phthisis pulmonalis, or of discriminating between this so frequently fatal

disease, and other usually curable diseases of the chest, with which he must frequently have confounded it, we cannot place much reliance on the curative effects of the emetic plan of treatment under such circumstances. No modern physician, qualified for the task, that is to say, capable of establishing the diagnosis of tubercular phthisis by means of its *physical signs*, has, as yet, so far as I am aware, given this plan of treatment a fair trial, or furnished us with facts deserving of the slightest confidence.

Only seven years ago, a modern physician, certainly, published a small treatise, entitled "*Observations and Experiments on Phthisis Pulmonalis, followed by a particular Method of Cure of this Disease.*" The author of this treatise is a Neapolitan, Giovanni de Vitis, first physician of the Military Hospital; and when I first heard of the number of cases of cure of phthisis which he states to have accomplished, my feeling of disbelief was so strongly excited that I gave but a very limited credence to the statement, and this I was the more disposed to do, that I had learned from personal observation the incapacity of physicians in the Neapolitan and Roman States of discriminating between phthisis and some other curable affections of the chest, more especially chronic catarrh and its complications, and chronic pleurisy. It is only within these few days that I have been able to procure the work of this author, and the perusal of it has more than confirmed the statement I have just made as to the utter worthlessness of his authority on such a subject, and the results which he has published of his new method of treatment. He does not even seem to know that such means as percussion and auscultation are employed to detect the existence of the disease; and yet, according to the old symptomatological system, he boldly classes the cases he has submitted to his method of treatment, under the heads—First, of chronic catarrh; second, of phthisis in the first degree; third, of phthisis in the second degree; fourth, of phthisis in the third degree. Of these he says he has cured forty cases of chronic catarrh; forty-seven of phthisis in the first degree; one hundred and two of phthisis in the second degree; and twenty-seven of phthisis in the third degree.

I shall not detain you by detailing the symptoms of any of the cases he has published, or the length of time which the treatment lasted, and for the reason I have already stated, that no confidence can be placed in statements regarding the cure of a disease such as phthisis, unless we possess the most satisfactory evidence in the first place of the existence of the disease before the treatment, and of its non-existence at some subsequent period. However, it is on other grounds than those I have already alluded to, that I am disposed to attach some importance to the treatment of phthisis by emetics. If the result of my researches on the seat and nature of tubercle is founded on fact, it affords some grounds for the rational hope that the cure of pulmonary phthisis may be promoted or facilitated by the



employment of emetics. If, as I have endeavoured to prove, the tuberculous matter which constitutes the material cause of the disease, is contained principally, or in the great majority of cases, within the air cells and minute bronchi, it is easy to perceive that its expulsion will be effected or promoted by the employment of such means; that the destruction of the pulmonary tissue will be less likely to occur, or occur less extensively; and that time may be afforded for the correction or the removal of that state of the constitution on which the formation of the tuberculous matter essentially depends, and without which the cure of the disease would in vain be attempted. The employment of emetics, under circumstances so unfavourable as those in which patients are placed in hospitals, will, I am afraid, be attended by disappointment, as, whatever efficacy they may possess in effecting the dislodgment and expulsion of the tuberculous matter, we cannot, at the same time, obtain that assistance from other means derivable from the well-regulated influence of temperature or climate, including pure air, exercise, and a variety of hygienic conditions, which conjointly contribute to the same end, and more especially towards the removal of the tuberculous diathesis.

As, however, the case which has given occasion to these remarks present a favourable opportunity for trying the efficacy of emetics, half a grain of the tartarized antimony, in solution, has been ordered to be taken every morning, and to be repeated, if necessary, until vomiting has been produced. The bowels to be regulated by the occasional use of a calomel and a colocynth pill; and for the present the patient is to be confined to low diet. The result of the treatment will be made known to you, and I would request you to observe for yourselves, and to examine the chest of the patient with care, that you may fully appreciate the importance of the physical signs which announce in him the existence of phthisis.

Having dwelt so long on this subject, I shall be brief with the observations I have to offer you on the second. I have already stated that this patient, James Shirley, æt. 36, of a stout, muscular form, never had a day's illness before the present attack, about two months and a half before his admission into the hospital, the 30th of this month; and yet how different the state of this patient from that of William Calvert, whose case I have laid before you, in whom the commencement of the disease dates only about two weeks earlier. In this patient it has, as I have stated, arrived at the second stage; the extent of the tubercular deposit is much greater, exists on both sides of the chest; but on the right side, the same side as in the other case, the signs of softening of the tuberculous matter, and of tubercular excavations, were recognisable more than two weeks ago, at the time he was admitted into the hospital.

The history of this case is very similar to that of the other. The patient caught cold, and soon became subject to a slight cough, which gradually increased; and, in the early part of Christ-

mas, was followed, for the first time, and after a fit of severe coughing, by the discharge of about a tea-spoonful of blood. A week after, he spit about the same quantity of blood after coughing. On the 2d of January after a paroxysm of coughing, he brought up nearly a pint of blood, and, two days after, to the amount of two pints. After this period he spat up, on two separate occasions, small quantities only of blood. Having gone for advice to a dispensary, he had a few leeches given him to be applied to the chest, and some days after, was cupped on the same part, apparently without any relief to the cough, which is said to have gradually increased, whilst the expectoration, at the same time, became more profuse.

On admission, the cough was very troublesome; worse at night, as is generally the case; it was accompanied by the expectoration of a quantity of thick, greenish-yellow coloured, rather tenacious mucus, somewhat frothy, and sometimes tinged with blood, and brought up with difficulty. On examination, sonorous, sibilant, and mucous rattles were heard in various parts of the chest. Besides, there was heard a slight gurgling sound under the right clavicle, dulness on percussion on the posterior part of the chest, opposite and over the clavicle, and occasionally a cavernous ring on coughing. The sounds of the heart were normal; pulse 110; skin hot and dry during the day, but perspiring during the night, and sometimes profusely; tongue whitish, and slightly furred; throat sore, from constant coughing; appetite good; no sickness; bowels open from medicine; urine less than in health, and deposits a sediment.

I shall merely observe that in these symptoms you have, first, the signs of bronchitis, and, secondly, those of phthisis. The yellowish-green coloured expectoration; mucous, sonorous, and sibilant rattles, indicated the presence of the bronchitis, and that of a subacute character, and which appears to have existed for some time. The dulness on percussion, the gurgling sound, and cavernous ring, are, in this case, equally characteristic of the presence of tubercular phthisis, not merely because of the existence of these signs, but because of their being heard at the summit of the upper lobe of the lung, and for the reasons with which you are already acquainted.

This patient had already lost much in strength and flesh; and that roughness of the voice, so common in confirmed phthisis, was also very conspicuous, and has of late become more so. He has been three weeks in the hospital, and has obviously become weaker and leaner; the cough remains much the same; expectoration is somewhat more easy; the sputa, although perhaps not so great in quantity, has more of the puriform character, is sometimes thick and adhesive, indicating the persistence of the subacute bronchitis, and are still tinged with blood; and the night perspirations are more profuse.

On the admission of the patient, cupping between the shoulders was employed, and was fol-



lowed by some relief to the cough; and, during the first week, he took an expectorant and anodyne mixture during the day, and an opiate at night. During the second week he was put upon the use of the solution of tartarised antimony, to be taken every morning. This was followed each time by vomiting, and the expectoration of a considerable quantity of muco-puriform matter. As, however, no amendment appeared to take place under the use of this emetic solution, and as the patient complained of great fatigue from its operation, and also of weakness, it was laid aside.

I cannot conclude without remarking that there is little hope of being able to do any permanent good in this case. If the disease has not advanced since the admission of the patient, it has exhibited no symptom, as I have already said, of amendment. The extent of the hæmoptysis in the first period of the disease is generally an index of the extent of the tubercular deposition, and as it was very considerable in this case, the more unfavourable is the prognosis, independently of the other circumstances which I have named as leading to the same conclusion.—*Lancet*.

*Two Cases of Episioraphy, to elucidate a Modification of the Operation.* By Dr. FRICKE, of Hamburg. *Case 1.*—This woman had already been successfully operated upon about fifteen months before, on account of a considerable prolapsus of the uterus. About two months before her admission, on the 8th March, 1837, she had been delivered of a full-grown child; but the accoucheur who had been called in to assist her had judged it necessary to divide the adhesions, consequent on the former operation, in order to facilitate labour. The natural result was a second prolapsus to an extent which prevented all exertion.

The edges of the labia were made raw and approximated to each other, and held in position by a number of sutures. The modification in the operation consisted in leaving a free space (in this case accidentally produced) of about half an inch in extent, at the anal commissure, by which the menstrual and other secretions could escape, without accumulating and causing inconvenience. Six weeks after the operation the woman left the hospital completely relieved.

*Case 2.*—J. A., aged forty-one, admitted 6th July, 1837, had suffered during the last six years from prolapsus of the uterus, which followed on difficult parturition, during which the forceps were applied. The protruded uterus and vagina were about the size of a child's head; the mucous membrane of the vagina was smooth, dry, and leathery, excoriated in many parts, and covered with hard scabs. Several days' rest, and preliminary treatment, were necessary before the uterus could be replaced; and seven days afterwards, the menses, which had not appeared for years, began to flow.

On the 22d August, the operation was performed as described in the preceding case, except, that here a space, sufficient to admit the finger, was purposely left free at the anal com-

missure. The union was complete in fourteen days, except a small part at the posterior edge of the wound, which speedily healed on touching it occasionally with caustic. The prolapsus was completely retained.

The advantages resulting from this modification of the operation, are:

1. It is less painful, and is more quickly performed.
2. Local antiphlogistic remedies are more easily applied.
3. Injections into the vagina escape readily through the orifice.
4. Mucus and the menstrual fluid are not retained.—*Brit. and For. Med. Rev., from Zeitschrift für die gesammte Medicin.*

*Influence of Artificial Feeding upon the Mortality of Infants.*—It would appear that the establishment of beneficent institutions in France, for the reception of illegitimate and deserted children, has not only tended to encourage profligacy, licentiousness, and cruelty, but has at length "fructified," after its own kind, in the production of still greater enormities. Such an evil tree could not but bring forth evil fruit.

It was soon found in the institutions alluded to, that the compassionate regulations of the "tours d'arrondissement," by which the wretched infants were sometimes enabled to obtain their natural food, and wholesome exposure to the air, so greatly increased the living burdens of the charity, that this mercy was withdrawn. And now the public are coolly informed of the statistical difference between natural and artificial feeding upon the mortality of infants; as if this artificial feeding had no cause in the moral wrong done to the infants by the prohibition of the only salutary course which had hitherto been open to them.

M. l'Abbé Guillard, chaplain to the General Hospital of Tours, states, in the hospital of X, (which he deems it inconvenient to name,) not a single infant has been suckled; all those who are received are nourished by hand, through a sucking bottle. In this hospital, a very exact account has shown that last year, out of 244 children, 197 had died at the end of the year! Of these, 116 lived only from a day to a month. Out of 127 infants in 1834, there remained only 29 at the end of the year. On the 1st of January, 1835, out of 362 infants, there remained alive only 127 at the expiration of twelve months.

The suppression of the "tours" has shown, also, in other hospitals, the murderous effect of this prohibition. Thus, in the Hospital de Poitiers, where the habitual proportion of deaths, in the first month of life, had been 12 to 100, have been now increased in that month above 35 in 100. In the Hospice de Loudun, 2 only out of 11 remained alive at the end of the year, and 4 out of 9 received in the first six months of 1835. These had been all artificially fed, and prohibited from being taken out.

At Moulins, in the first months of 1835, 128 were admitted, and 100 of these had died.—*Ibid, from Bulletin Général de Thérapeutique.*